United States Environmental Protection Agency
Solid Waste and Emergency Response (5502G)
EPA 520-F-93-01 1
Summer 1993

EPA

Superfund At Work

Hazardous Waste Cleanup Efforts Nationwide

Coal Creek Site Profile

Site Description: An inactive transformer salvage facility, one mile northeast of Chehalis, Washington

Site Size: Eight acres

Primary Contaminants: Polychlorinated biphenyls (PCBs), asbestos, dioxin, and heavy metals (copper and lead)

Potential Range of Health Risks: Dermatitis, central nervous system disorders or cancer from direct, long-term exposure to soil, oils and sediments

Nearby Population: Approximately 6,670 people within a two-mile radius

Ecological Concerns: Damage to the Coal Creek floodplain and nearby wetlands

Year Listed on NPL: N/A

EPA Region: 10

State: Washington

Congressional District: 3

Success In Brief

EPA Gains Cooperation of 86 Parties to Clean Up Coal Creek

The U.S. Environmental Protection Agency (EPA) designed a remedy that will permanently remove polychlorinated biphenyls (PCBs), lead, and copper from the Coal Creek site in Chehalis, Washington. Through careful negotiations, EPA secured the participation of all 86 waste contributors to conduct the cleanup, valued between $13 and $15 million. These accomplishments involved:

- Designing a two-phased cleanup plan to remove and destroy contaminants, ensuring the long-term safety of local residents and sensitive ecosystems;
- Facilitating cooperation among the responsible parties, leading to the formation of the Coal Creek Steering Committee, which agreed to perform the cleanup; and
- Working with the State of Washington to evaluate site conditions and involve the community in the selection of the remedy.

The Coal Creek site illustrates the need for a federal enforcement program to ensure that waste contributors conduct comprehensive cleanups that protect citizens and the environment. EPA took the lead in coordinating cleanup activities, an important intervention at a time when the state did not yet have its own hazardous waste cleanup law.

Using a rotary rig, cleanup workers determine the presence of underground storage tanks and leakaae at Coal Creek site.

The Site Today

The site is stable and immediate threats have been eliminated. The first phase of the cleanup began in March 1993 and is now complete. This effort involved decontamination, demolition, and removal of asbestos-contaminated buildings. Underground storage tanks were pumped and removed, their contents stored for future incineration. The second cleanup phase is scheduled to begin in the fall of 1993.

A Site Snapshot

The eight-acre Coal Creek site is located one mile northeast of Chehalis, Washington in an area surrounded by light commercial activity and rural residences.The site is bordered on two sides by Coal Creek and lies partly within the creeks floodplain. In addition, wetlands in the western portion of the site serve as habitat for a variety of birds. Approximately 6,670 people live in the City of Chehalis, and the nearest residence is one eighth of a mile from the site.

The site has been owned primarily by public utilities since the early 1900s and is presently owned by the Lewis County Public Utility District. Between 1946 and 1983, utility companies used the site for manufacturing, repairing and recycling, and permitted their lessors to scrap electrical equipment, including transformers, on site. During salvage operations, transformer fluid containing PCBs was drained or spilled onto the site. Dioxins and heavy metals (lead and copper) also were present due to the handling and disposal of scrap metal equipment, ash, and oil. In addition, an on-site shop building contained asbestos.

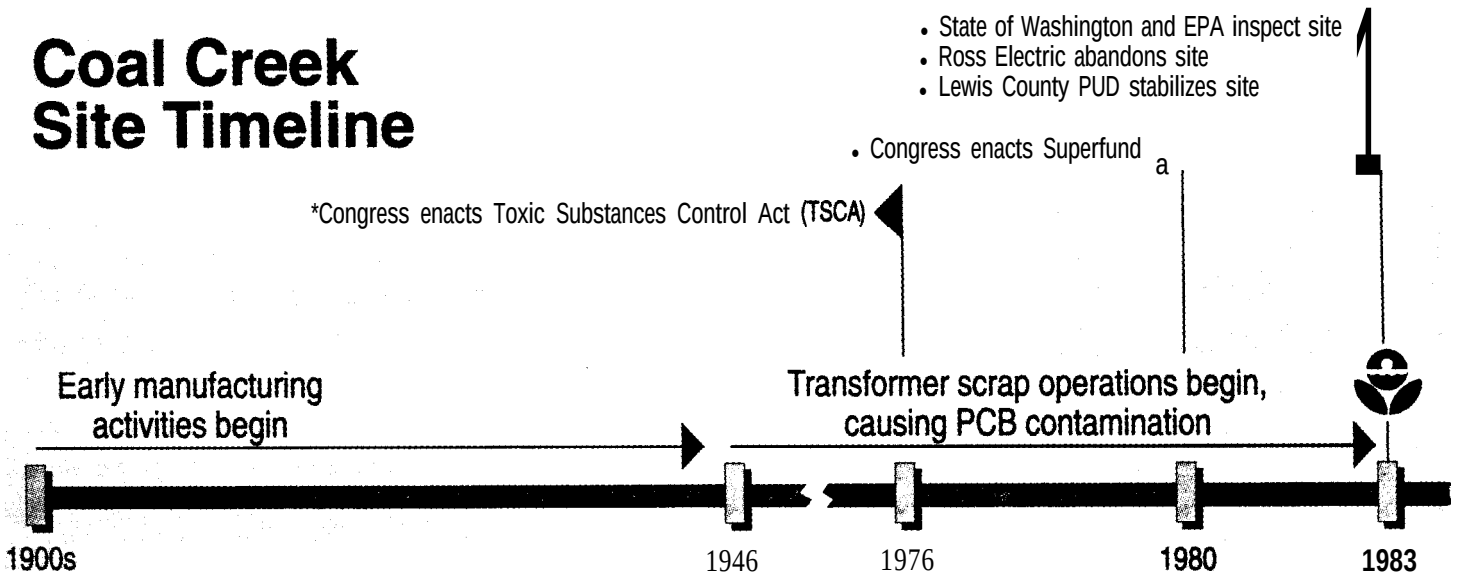
PCB, lead and copper contamination pose the most significant threats to the environment and surrounding community

Prior to the initial cleanup, the most extensive contaminants were sludges confined to underground storage tanks and a mound that covered one-quarter of the site. This mound contained soil, ash, coal remains, mixed debris and tainted ground water, and was formed by improper waste disposal practices, including the dumping and spilling of waste oil. A drainage ditch extended from the mound to a wetlands area that discharged into Coal Creek, and the shop building sat atop a contaminated oil pool.

Perched ground water trapped in the mound was contaminated with low levels of PCBs and chlorobenzenes, but was not a source of drinking water for the city. The surrounding environment was not significantly affected by discharges of contaminants from the site. The total volume of contaminated soil is estimated at 17,300 cubic yards; the volume of liquid contaminants and affected ground water is several thousand gallons. This waste will be incinerated in the fall of 1993.

PCB, lead and copper contamination posed the most significant threats to the environment and surrounding community. Potential health effects from long-term direct exposure to these contaminants include dermatitis, neurological disorders, and an increased risk of cancer. To date, no health problems have been reported from those who live near the Coal Creek site.

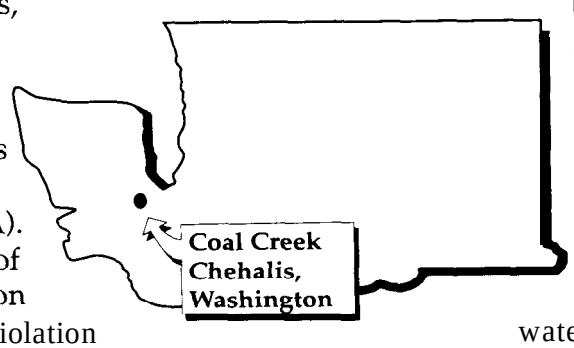
Coal Creek Site Timeline



Waste Contributors Clean Up Coal Creek

Complaints Lead to State and Federal Actions

In 1983, the Washington State Department of Ecology and EPA conducted a joint inspection of the operating Coal Creek site for compliance with state and federal pollution standards. The operator of the site, Ross Electric Corporation, and the owner, Lewis County Public Utility District (PUD), were found to be in violation of state and federal regulations, including the federal Toxic Substances Control Act (TSCA). The State of Washington issued a violation notice and an order requiring Ross Electric to clean up the site.



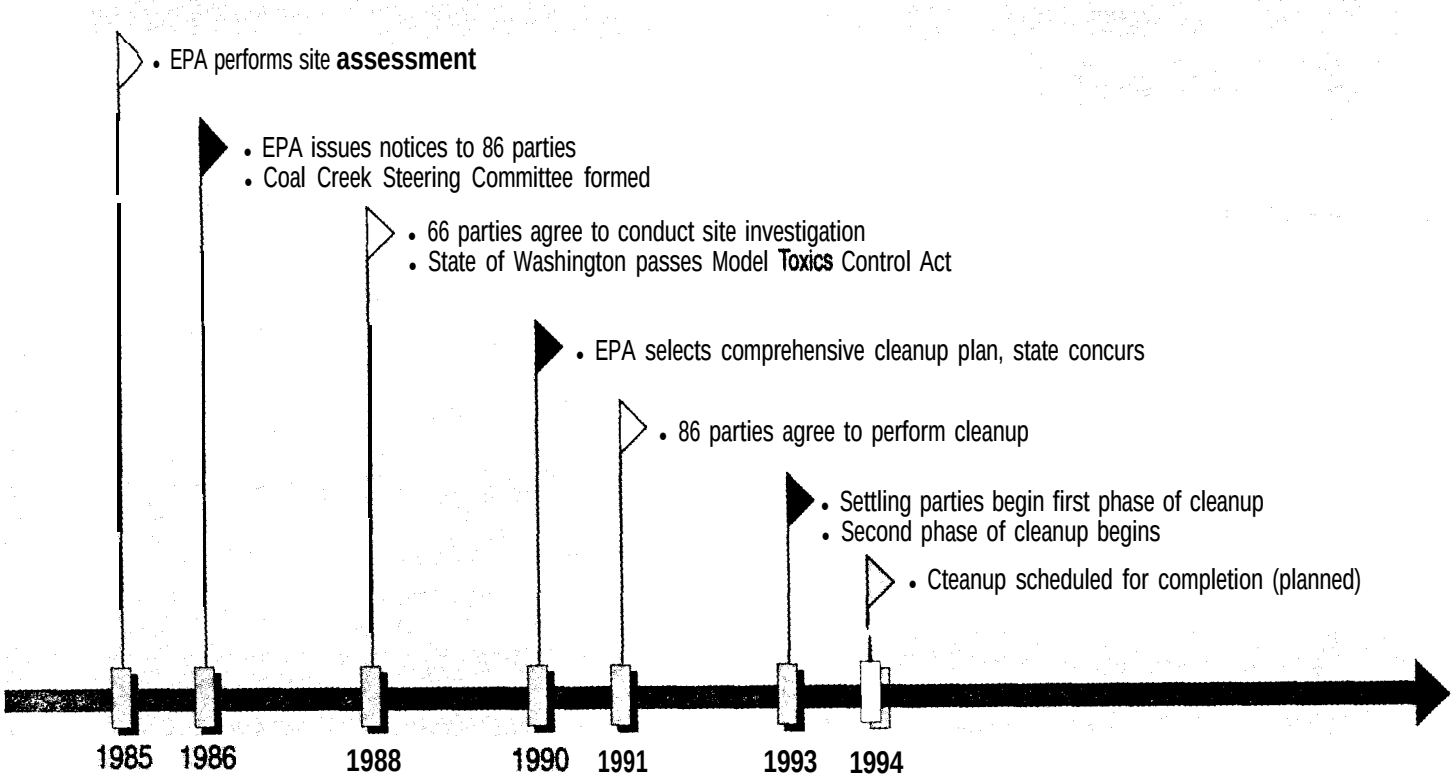
Ross Electric only partially satisfied the order. EPA issued additional notices of violation and levied penalties against the company. In September 1983, Ross Electric abandoned the property and moved its operations. From that point on, the Lewis County PUD assumed responsibility for the site. At the direction of the state, Lewis County PUD stabilized the site by covering portions of the waste mound with plastic, damming the drainage ditch, installing ground water monitoring wells, and erecting a fence.

Although Coal Creek was not placed on the NPL. EPA remained involved in coordinating the cleanup activities

Some Non-NPL Sites Deserve Federal Attention

Because the primary intent of TSCA is to regulate and manage the use of toxic substances — not to clean up abandoned hazardous waste sites — enforcement authority was transferred to the Superfund program.

The site then was assessed and scored according to criteria that rank the nation's potentially hazardous waste sites. Those that are placed *on* the National Priorities List (NPL)



are eligible for comprehensive cleanup and funding under the Superfund program. But the Coal Creek site did not satisfy the criteria for placement on the NPL. At non-NPL sites, EPA normally removes the primary hazards at the site, and leaves the long-term cleanup to the state. However, at the time the Coal Creek site was scored, the State of Washington had not yet established a program for abandoned waste sites.

In light of the potential long-term threats at the site and expressed community concerns, the Superfund program remained involved and took the lead in coordinating the cleanup activities.

Former Superfund site manager Bill Glasser being interviewed by a local news station regarding the Coal Creek's transformer and scrapping operations.

EPA Organizes Cleanup

In early 1985, Lewis County PUD failed to respond to an EPA order requiring a study of the immediate hazards at the site, and so EPA initiated a site assessment. *In 1986,* EPA issued notices to 86 parties who contributed contaminants to the site, informing them of their cleanup responsibilities. At the Agency's suggestion, these parties formed the Coal Creek Steering Committee, which served as a decision-making body to communicate with EPA.

The Coal Creek Steering Committee served as a decision-making body for the waste contributors

In February 1988, following negotiations with the steering committee, EPA signed a consent order with 66 of these parties, requiring them to conduct a comprehensive investigation of the site. EPA used the data from this study to calculate health risks posed by the site and as the technical basis for selecting its final cleanup remedy for the site. With the cooperation of the state Department of Ecology, EPA issued a proposed cleanup plan in May 1990. A combination of treatment and containment remedies was selected to meet these health-based standards, including the following:

- Removing asbestos and demolishing on-site structures;
- Excavating and incinerating contaminated soil, sediment and water trapped in the fill area and on-site container liquids and sludges, to permanently destroy PCBs;
- Capping incinerator ash and remaining soil and debris;
- Constructing trenches to divert surface water; and
- Monitoring ground water for five years.

These measures were designed to prevent contaminants from migrating into the ground water, surface water, or air. In addition, EPA and local authorities will restrict future land and ground water use to ensure the integrity of the cap.

In June, EPA held a public meeting to discuss this plan and to invite public comment. EPA's preferred cleanup method was finalized, with state concurrence, and embodied in the Agency's October 1990 Record of Decision.

Negotiations Completed in Four Months

In February 1991, the Coal Creek Steering Committee entered into further negotiations with EPA and the U.S. Department of Justice. Four months later, two separate agreements were reached in which all 86 of the contributing parties agreed to pay for the cleanup, valued between $13 and $15 million.

Under the first agreement, 63 of the site's large waste contributors agreed to perform the cleanup and to fully reimburse EPA for oversight and monitoring costs. The second agreement required 23 *de minimis* parties (companies or individuals who contributed hazardous materials

continued on page 5

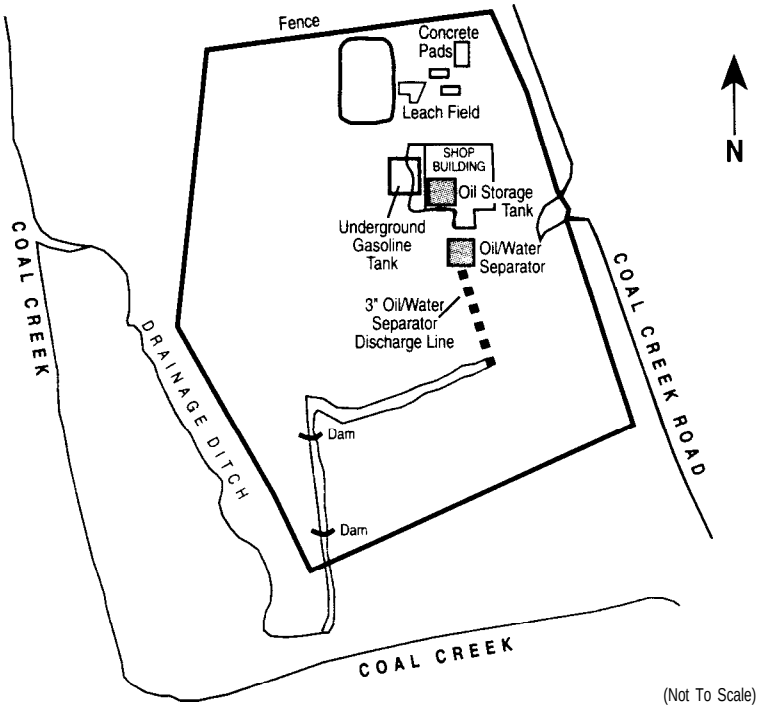
Waste Contributors Clean Up

continued from page 4

that were minimal in both volume and toxicity) to put their share of the costs into a trust fund established for the cleanup. The pooled resources help to ensure that the cleanup remains on schedule.

Planned Cleanup Tailored to Contamination

The first phase of cleanup began in March 1993 and is now complete. This work involved decontaminating on-site buildings by removing asbestos and waste oil, and demolishing them. Underground storage tanks were pumped, removed, and their contents temporarily stored on site. Rainwater run-off controls were installed and contaminated water is currently being treated.



The Coal Creek site as it appeared before cleanup

The second, more complex, cleanup phase is scheduled to begin in the fall of 1993 and is expected to take nine months. The focus of this phase is the excavation and incineration of soil and wastes temporarily stored during the initial phase. Ground water trapped inside the waste pile also

continued on page 6

State Authority of Non-NPL Sites

Since the passage of the Superfund law in 1980, states have become increasingly involved in working with EPA to coordinate site cleanups. As of 1992, 29 states and U.S. territories have enforcement authority and the resources to conduct removal and remedial actions at non-NPL sites. Twelve other states have passed legislation to conduct or compel private party cleanups of non-NPL sites, but have undertaken limited cleanup activities. The remaining 11 states and territories lack either enforcement authority or funds. Only Nebraska and the District of Columbia do not have their own cleanup programs.

State "Superfund" laws authorize a broad range of activities at non-NFL sites. State programs vary, but often share the following characteristics:

- Procedures for emergency response actions and long-term cleanup of hazardous wastes;
- Provisions for a fund or financing mechanism to pay for studies and cleanup; and
- Enforcement authority to compel responsible parties to do the work.

When the cleanup began at Cd Creek, the State of Washington did not yet have its own hazardous waste cleanup law, so EPA took the lead to ensure that the site would be cleaned up. In 1988, the State of Washington passed the Model Toxics Control Act, authorizing two accounts for funding state cleanup of hazardous waste sites, enforcement mechanisms to compel cleanup, and public participation procedures. As a result, Washington now has the authority to comprehensively address hazardous waste sites and respond to community concerns.

Clean Up

continued from page 5

will be incinerated. Engineers will assemble a temporary, on-site incinerator to burn liquids, sludge, and soil.

All 86 of the contributing parties agreed to conduct the cleanup

The incinerator will destroy virtually all of the hazardous materials and toxins in the wastes, including PCBs. The resulting ash will be tested for metal content to determine whether it can safely be landfilled or placed on the site under an impermeable cover. Ash, which has the potential to leach metals into the environment, will be solidified to prevent dispersion into soil and ground water before it is landfilled.

After the cleanup, the responsible parties will monitor ground water for a minimum of five years and will ensure that no drinking water wells are drilled. A fence has been constructed around the property and will be maintained indefinitely as part of long-term site security. Locally-enforced deed restrictions will limit other future uses of the site.

Success at Coal Creek

By taking the lead in coordinating cleanup actions at Coal Creek, EPA's Superfund program reached two agreements with all 86 waste contributors to treat and contain contaminants.

These actions will ensure that hazardous chemicals do not further contaminate ground water or spread off site, protecting the long-term safety of local residents and the environment.

If you wish to be added to or deleted from our mailing list or to comment on this bulletin's content, length or format, please call ***(703) 603-8984, or*** send a letter to ***Superfund At Work*** (5502G), 401 M Street SW, Washington, DC 20460

For additional copies of this or other ***Superfund At Work*** updates, contact the National Technical Information Service, US. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161, telephone (703) 487-4650

EPA

United States Environmental Protection Agency
5502G
Washington, D.C. 20460

Official Business
Penalty for Private Use $300

First Class Mail
Postage and Fees Paid
EPA
Permit No. G-35

Printed on recycled paper